

US FOREST SERVICE NORTHWEST MONTANA BACKCOUNTRY AVALANCHE ADVISORY



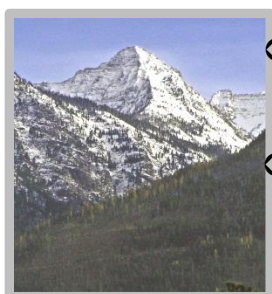
FOR THE GLACIER PARK AND FLATHEAD & KOOTENAI NATIONAL FOREST AREAS

Avalanche advisory does not apply to developed ski areas

Issue Date: 6:30 AM, Friday, December 30, 2011
Valid Until: Midnight, Friday, December 30, 2011
Next Update: Tuesday, January 3, 2012
Issued by: Stan Bones

This advisory is a product of the US Forest Service, US Dept. of Agriculture. Along with other snow and avalanche information, it is originally posted at <http://www.fs.usda.gov/flathead>. An audio summary is available via telephone at 406-257-8402

All Mountain Ranges



7,500 ft. elevation



5,500 ft.



Avalanche Danger Summary

4 - High : 5,500 to 7,500 ft. elevation on steep, open terrain

2 - Moderate : below 5,500

AVALANCHE – INSTABILITY DESCRIPTION

All Mountain Ranges - 5,500 to 7,500 ft. elevation

Danger Level	4 - HIGH
Confidence	Good
Travel Advice	<ul style="list-style-type: none"> Very dangerous avalanche conditions exist Travel in avalanche terrain not recommended
Likelihood of Avalanches	<ul style="list-style-type: none"> Natural avalanches likely Human triggered avalanches very likely
Avalanche Size & Distribution	<ul style="list-style-type: none"> Large avalanches in widespread areas

AVALANCHE – INSTABILITY DESCRIPTION

All Mountain Ranges – below 5,500 ft. elevation

Danger Level	2 - MODERATE
Confidence	Good
Travel Advice	<ul style="list-style-type: none"> Heightened avalanche conditions on steep, open slopes and gullies Evaluate snow and terrain carefully
Likelihood of Avalanches	<ul style="list-style-type: none"> Natural avalanche unlikely Human triggered avalanches possible Small avalanches in specific areas or
Avalanche Size & Distribution	<ul style="list-style-type: none"> Larger avalanches in isolated areas Concern is steep, open slopes and gullies lacking vegetative and terrain anchors

Because of the general nature of this advisory message, each backcountry party will always need to make their own time and site specific avalanche hazard evaluations. This advisory best describes conditions at the time of its issuance. As time passes avalanche and snow conditions may change, sometimes quite rapidly. Elevation and geographic distinctions used are approximate and transition zones between hazards exist.

Recent Mountain Weather

Summary	<ul style="list-style-type: none"> • Tuesday –Thursday ---Very strong zonal flow of warm, moist Pacific air pushed over the region as the jet stream was centered aloft
Precipitation	<ul style="list-style-type: none"> • Northern tier mountains (Cabinets, Purcells, Whitefish, & Livingston) received the most precipitation <ul style="list-style-type: none"> ◦ Approx. 2.4-inches of snow-water-equivalent over 60 hours • Southern tier mountains (Swan, Mission, and Flathead) generally received lesser amounts <ul style="list-style-type: none"> ◦ Approx. 1.2-inches of snow-water-equivalent over 60 hours • Wednesday night storm finished warm with rain at most locations below 5,000-6,000 ft. elevation
Temperature	<ul style="list-style-type: none"> • Tuesday – average 24-hr. temperature in the mountains was approx. 28° F (range approx. 25° - 31°) • Wednesday – average 24-hr. temperature in the mountains was approx. 34° F (range approx. 33° - 36°) • Thursday – average 24-hr. temperature in the mountains was approx. 30° F (range approx. 27° - 33°)
Wind	<ul style="list-style-type: none"> • Winds very strong, generally from the SW to W

Field Observation Locations

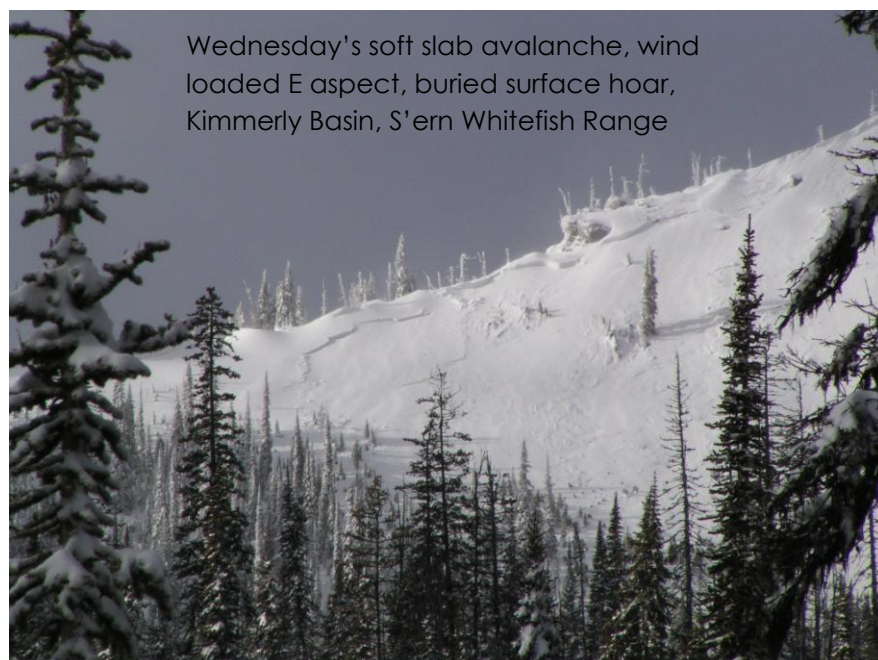
Thursday, 12-29-11	<ul style="list-style-type: none"> • Bear Mountain, West Cabinet Range, SW of Troy • Kimmerly Basin, S'ern Whitefish Range, NW of Columbia Falls
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Observer Report Locations

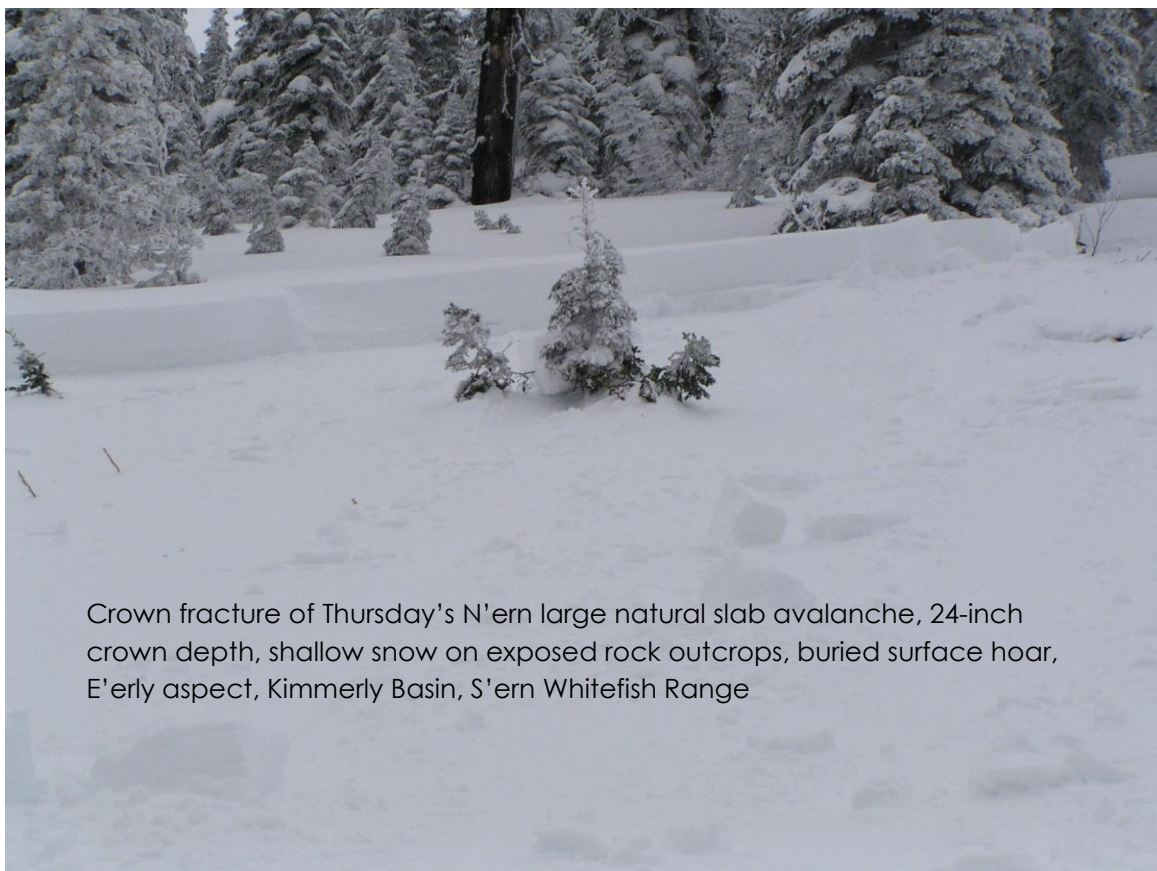
Thursday, 12-29-11	<ul style="list-style-type: none"> • In-bounds avalanche control, Whitefish Mountain Resort, S'ern Whitefish Range, N of Whitefish • Marion Lake area, Flathead Range, W of Essex
Wednesday, 12-28-11	<ul style="list-style-type: none"> • Out-of-bounds (N & E) Whitefish Mountain Resort, S'ern Whitefish Range, N of Whitefish

Avalanches Observed	Yes	<ul style="list-style-type: none"> • Thursday <ul style="list-style-type: none"> ◦ Very active explosives avalanche control work at Whitefish Mountain Resort, S'ern Whitefish Range ◦ Several large dry natural slab avalanches observed in Kimmerly Basin, S'ern Whitefish Range ◦ Multiple wet loose slides seen at mid elevation above Kimmerly Cr enroute to Kimmerly Basin ◦ Multiple natural releases seen above Marion Lake near Essex, Flathead Range • Wednesday <ul style="list-style-type: none"> ◦ Both natural and skier triggered avalanches reported out-of-bounds, N&E of Whitefish Mtn. Resort, S'ern Whitefish Range ◦ Both small and large natural soft and hard slab avalanches observed on Bear and Benning Mountain, W Cabinet Range
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Instability Concern / Avalanche Problem	Level of Concern	Most★★★ Less★★ Least ★		
New Storm or Near Surface Snow	★★★	<ul style="list-style-type: none"> Significant new snow Tuesday and Wednesday accompanied by wind New mtn snow and valley rain Thursday night Recent mtn snowfall has been relatively warm and dense, being deposited upon colder more weakly bonded snow – inverted snowpack Kootenai mtns. reporting a surface 1-inch knife hard rain crust at many locations 		
Wind Loading	★★★	<ul style="list-style-type: none"> Very strong winds produced wind loading Wednesday and Thursday morning Much of the slab avalanche activity observed in the S'ern Whitefish Range Thursday was wind related 		
Recent or Persistent Buried Weak Layer	★★★	<ul style="list-style-type: none"> Intermittent nighttime clearing has produced & maintained significant snow temperature gradients at the higher elevations In addition to wind, buried weak layers of faceted or angular grains were very much involved in Thursday's avalanches in the S'ern Whitefish Range Whumphing and shooting cracks experienced on shallow snow packs on cold E'erly and N'erlys aspects Kimmerly Basin avalanches were all releasing on steep rock outcrop slopes with shallow snow covers <ul style="list-style-type: none"> Step fractures of 2-3-ft. depth, frequently almost full depth to the ground 		
Spring Wet Snow or Melt-Freeze		Not applicable		
Rain-on-Snow	★★	<ul style="list-style-type: none"> Occurring at lower elevations 		
Loose Snow	★★	<ul style="list-style-type: none"> Generally wet avalanching related to rapid warming or rain on very steep slopes at mid elevations. 		
Other Concerns				



Thursday's two large natural slab avalanches, shallow snow on exposed rock outcrops, buried surface hoar, E'erly aspects, sympathetic releases, Kimmerly Basin, S'ern Whitefish Range



Crown fracture of Thursday's N'ern large natural slab avalanche, 24-inch crown depth, shallow snow on exposed rock outcrops, buried surface hoar, E'erly aspect, Kimmerly Basin, S'ern Whitefish Range

Weather Forecast[Current NWS Backcountry Forecast](#)

Summary	<ul style="list-style-type: none"> • Another Pacific weather system will bring more moderate to heavy precipitation and gusty winds to the region • Initial snowfall will be heavy wet • Behind the cold front snowfall is forecasted to cool and become more powdery • Drying Sunday as a ridge of high pressure builds over the region°
Precipitation	<ul style="list-style-type: none"> • Friday - >0.50-inch of snow water equivalent, 4-6-inches of new mountain snowfall • Friday night – approx. 0.30-inch of snow water equivalent, 4-6-inches of new mountain snowfall as temperatures cool • Saturday – approx. 0.15-inch of snow water equivalent, 2-3-inches of new mountain snowfall • Saturday night/Sunday – only trace amounts of new snow
Temperature	<ul style="list-style-type: none"> • Friday – 30-40° F • Friday night – 15-30° F • Saturday – 20-30° F • Saturday night – 5-15° F • Sunday – 25-35° F
Wind	<ul style="list-style-type: none"> • Through the weekend, mostly W-SW • Gradually diminishing; approx. 25 MPH Friday, to approx. 5MPH by Sunday

Avalanche Outlook

Trend	<ul style="list-style-type: none"> • Through the weekend we expect the avalanche danger to remain near current levels
Concern	<ul style="list-style-type: none"> • More snow/rain and wind will maintain instability Friday • Cooling and drying Saturday will be good for promoting stability • Clearing and solar warming Sunday could be a concern on S'ern aspects
Comment	<ul style="list-style-type: none"> • Always carry and know how to use avalanche safety equipment • Watch for a possible rapid change in weather conditions beyond forecast amounts • Be alert that if a slope is open enough to ski or highmark currently it is very likely an established avalanche path. • Check out the site specific snow stability before jumping in or on • Know that shallow snowpacks are notorious for producing trauma injury and death, washing victims over cliffs and into rocks.

Upcoming Events

Beginning next Tuesday, January 3rd Flathead Nat'l Forest will be hosting a public advanced avalanche awareness and safety workshop, particularly for skiers, snowboarders, snowshoers, and mountaineers:

- Four night lecture series, Tuesdays and Thursdays, January 3,5,10,&12
- Two Saturday field sessions, January 7&14
- Is a series program that builds on previous topics, participants are encouraged to attend all sessions
- Free of cost
- No registration, just show at the door

Workshop location is Kalispell

- Flathead Supervisor and Tally Lake Ranger District Office
 - 650 Wolfpack Way
 - On Stillwater Rd, west of Glacier High School, and just north of Montana State DNRC office
 - Time 6:30 – 9:30 PM.
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Flathead Nat'l Forest will be presenting a similar program for snowmobiling the last two weeks of January, 2012. Lecture dates are Mondays and Wednesdays, January 23,25,30,&February 1. The all-day Saturday field sessions are January 28 & February 4. Lecture location and time is the same as the workshop above.